REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3-4, 8-16, and 26-63 are presently active; Claims 2, 5-7, and 23-25 have been canceled without prejudice; Claims 17-22 have been withdrawn from consideration; and Claims 1, 3, 9, 12-14, 26, 30, 33-35, 38, 45-47, 55, and 60 have been presently amended.

In the Office Action, Claim 3 was objected to. Claims 1, 3-4, 8-16, and 26-37 were rejected under 35 U.S.C. §1112, second paragraph, as being indefinite. Claims 1, 3-4, 9, 11-16, 26-28, 30, 33-42, 45-49, 55-59, and 60-63 were rejected under 35 U.S.C. §103(a) as being anticipated by Inoue et al (U.S. Pat. No. 6,218,206) in view of Yamamoto et al (U.S. Pat. No. 5,514,909). Claims 8, 29, and 43 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inoue et al and Yamamoto et al in view of Takayama (U.S. Pat. No. 5,903,055). Claims 50-54 were indicated as being allowed.

Firstly, Applicants acknowledge with appreciation the indication of allowance for Claims 50-54.

Secondly, Applicants acknowledge with appreciation the courtesy of Examiner Nguyen to interview this case on September 16, 2005 during which time the issues in the outstanding Office Action were discussed as substantially summarized herebelow.

During the interview, Applicants' representative discussed changes to overcome the 35 U.S.C. § 112, second paragraph, rejection and pointed out that the previously identified allowable subject matter in the Office Action dated January 31, 2005 was included in the previously amended and included in the previously submitted new independent claims filed in response to that Office Action.

The outstanding Office Action asserts that Yamamoto et al disclose at least part of alloy components constituting the aluminum alloy film as a precipitate (col. 4, line 38) and

containing at least one element in the range of 0.1 to 6 atomic percent as its alloy component, the element selected from the group consisting of Ni (col. 2, lines 38-39).[1] Yet, the outstanding Office Action does not identify where in Inoue et al, Yamamoto et al, or Takayama that a teaching of the recited formula (I) of Claim 1 or formula (II) of Claim 26 exists.

During the interview, as noted on the Interview Summary Sheet, Examiner Nguyen requested that Claims 1 and 26 be amended so that the ranges defined prior to the respective formulas are consistent with the range of the formulas. Accordingly, such amendments have been made such that, for example, in Claim 1, the lower limits (i.e., at least 0.1%) of the first alloy component (X_1) and the second alloy component (X_2) are defined, and formula (I) establishes the upper limit as to how much of the first alloy component and the second alloy component in combination can be used

Thus, it is respectfully submitted that Claims 1 and 26 presently are definite, contain allowable subject matter, and patentably define over Inoue et al, Yamamoto et al, and/or Takayama.

Lastly, regarding the assertions in the outstanding Office Action that it is inherent to that a particle of a precipitate disclosed by Yamamoto et al would have a size of more than 0.01 μm in a major diameter and the number of the particles to exceed 0.13 particle/100 μm^2 since it includes the same material,[2] Applicants submit that, as detailed below, particle size and particle density are not inherent properties, but rather depend on the aluminum alloy constituents, the alloy element concentration, and the thermal history of the alloy. M.P.E.P. § 2112 states that, to establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be recognized by persons of ordinary skill. M.P.E.P. § 2112 further states that inherency may not

[1] Office Action, page 4, lines 21-24.
[2] Applicants respectfully point out that the precipitate size and particle density in previously added independent Claims 38, 55, and 60 were features also identified in the January 31, 2005 Office Action as being allowable.

be established by probabilities or possibilities.

Claim 38 defines an electronic device having a first electrode including a metal oxide, and a second electrode including an aluminum alloy film. In the contact interface between the aluminum alloy film and a first electrode, at least a part of alloy components constituting the aluminum alloy film exist as a precipitate, wherein a particle of the precipitate has a size of more than 0.02 μm in major diameter and the number of the particles exceeds 33 particles/100 μm^2.

Applicants' specification describes on page 35, lines 7-18, that precipitate size depends on the thermal history of the alloy including its time at temperature. Applicants' specification shows on pages 50 and 51 that the precipitate size and area density obtained in various aluminum alloy films depend on the alloy of aluminum and the concentration of the alloying element being used. Specifically, the examiner's attention is invited to the Al-Ni rows in Table 2 that shows that the area factor of the precipitate changes remarkably with the Ni composition. Thus, the precipitate size and area density in an aluminum alloy film will depend on the heating treatment applied, the time at temperature, and the concentration and presence of other alloy components in the aluminum alloy.

Since Yamamoto et al is relied on for its teaching of at least Ni as its alloy component, without specification of the concentration of alloy components, it is not possible to know what precipitate sizes or area densities are present in Yamamoto et al. Furthermore, the annealing profile in Example 1 of Yamamoto et al of 400 °C for 1 hour is far more extensive than the thermal annealing profile disclosed in Applicants' specification of 150-400 °C for 15 minutes or longer. The other thermal annealing profiles in the other examples of Yamamoto et al likewise appear to be far more extensive. Applicants submit that a far more extensive thermal annealing profile could result in conglomeration of the precipitates, resulting in lower area densities of precipitate particles than claimed. Thus, a conclusion that the precipitate size and

area factor in Yamamoto et al is inherently the same as claimed because similar aluminum alloys are annealed is an improper conclusion.

Hence, with the features of independent Claims 38, 55, and 60 having not been shown to be inherent in Yamamoto et al by the standard defined in M.P.E.P. § 2112, those claims and the claims dependent therefrom are believed to patentably define over Yamamoto et al, and thus over the other references of record.

Lastly, given the dependence of the withdrawn claims on Claim 1, it is respectfully requested that withdrawn Claims 17-22 be rejoined upon allowance of Claim 1.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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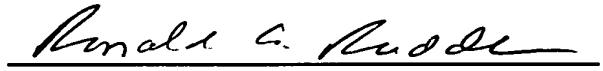

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